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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,059	11/14/2003	David G. Frank	9351-291	9053
1059	7590	12/20/2005	EXAMINER	
BERESKIN AND PARR 40 KING STREET WEST BOX 401 TORONTO, ON M5H 3Y2 CANADA			WILLS, MONIQUE M	
			ART UNIT	PAPER NUMBER
			1746	
DATE MAILED: 12/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/712,059

Applicant(s)

FRANK ET AL.

Examiner

Monique M. Wills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/27/05.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

This Office Action is responsive to the amendment filed October 27, 2005. Claims 1-10 are cancelled. Claims 11-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 & 4-10 of U.S. Patent No. U.S. Patent 6,761,991.

### ***Information Disclosure Statement***

The information disclosure statements filed October 27, 2005 has/have been received and complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 11-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 & 4-10 of U.S. Patent No. U.S. Patent 6,761,991. Although the conflicting claims are not identical, they are not patentably distinct from each other because they have the same subject matter as follows:

Claim 1 of Frisch embraces instant claim 11 by necessitating: a fuel cell stack comprising a groove filled with a sealing material of the composition: material containing:

- (a) 100 parts by weight of a polydiorganosiloxane containing two or more silicon-atom-bonded alkenyl groups in each molecule;
- (b) 5-50 parts by weight of a reinforcing filler;
- (c) 1-20 parts by weight of an oxide or hydroxide of an alkaline earth metal with an atomic weight of 40 or greater;
- (d) an organohydrogensiloxane containing three or more silicon-atom-bonded hydrogen atoms in each molecule, the hydrogen atoms being present in an amount providing a molar ratio of silicon-atom-bonded hydrogen atoms in component (d) to silicon-atom-bonded alkenyl groups in component (a) which is in a range of 0.4:1 to 5:1; *and*

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(e) a platinum-type metal catalyst in an amount providing 0.1-500 parts by weight of platinum-type metal per one million parts by weight of component (a). See column 12, lines 1-26.

Claim 4 of Frisch embraces instant claim 12 by necessitating that the seal material further comprises: (a) 0.1-5.0 parts by weight of an organic peroxide in combination with component (e) or in place of component (e); (b) 0.01-5.0 parts by weight of an inhibitor; and (c) 0.01-100 parts by weight of a non-reinforcing extending filler. See column 18, lines 18-26.

Claim 5 of Frisch embraces instant claim 13 by necessitating: the polydiorganosiloxane of component is a vinyl terminated polydimethylsiloxane having a viscosity of at least 55 Pa.s (55,000 cP). See column 12, lines 34-40.

Claim 6 of Frisch embraces instant claim 14 by necessitating: component (a) is a vinyl terminated trifluoropropylmethylsiloxane dimethylsiloxane copolymer in which the mole percent of methyltrifluoropropyl is 10-100 mole percent. See column 22, lines 4-9.

Claim 7 of Frisch embraces instant claim 15 by necessitating: component (a) is a vinyl terminated diphenylsiloxane dimethylsiloxane copolymer in which the mole percent of diphenylsiloxane is 2-50 mole percent. See column 22, lines 9-13.

Claim 8 of Frisch embraces instant claim 16 by necessitating: component (e) is encapsulated in a thermoplastic organic polymer. See column 22, lines 13-16.

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Claim 9 of Frisch embraces instant claim 17 by necessitating: component (e) is present in an amount to provide 5 parts by weight of platinum type metal per one million parts by weight of component (a) (col. 6, lines 63-68), and the composition is cured by heating it to a temperature of 100°C (col. 22, lines 20-21).

Claim 9 of Frisch embraces instant claim 18 by necessitating: component (e) is an organic peroxide, instead of the metal catalyst, present in an amount of 0.5-5.0 parts per 100 parts of the composition, and the composition is cured by heating it to a temperature of 100-200° C. See column 22, lines 15-21.

Claim 5 of Frisch embraces instant claim 20 by necessitating: the viscosity of the curable composition is at least 55,000cP. See column 22, lines 1-5.

Claim 10 of Frisch embraces instant claim 19 by necessitating: Frisch teaches that the curable composition further comprises: (f) 0.1-20 parts by weight of an adhesion promoter which is an epoxy containing organosilicon compound. See column 22, lines 20-28.

Frisch does not expressly disclose the method of injecting the sealing material in the groove.

However, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to inject sealing material into the

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groove as an effective and well known means of placing sealing material in the fuel cell plate.

### ***Allowable Subject Matter***

Claims 11-20 would be allowable over the prior art of record once the double patenting rejection is overcome. The prior art is silent to injection a curable sealing material having the composition set forth in claim 1.

### ***Response to Amendment***

Applicant contends that the Double Patenting rejection is invalid because “[t]here is nothing in [‘991] to suggest that the seal material can be injected in a completely enclosed groove network formed between plates within an electrochemical cell assembly, to form the necessary seals between adjacent plates”. This argument is not persuasive for two reasons. First, the Double Patenting rejection previously stated that ‘911 was silent to injecting the sealant into a groove network however, it would be obvious to employ the seal in the manner necessitated by claim 1. The sole method step of injecting the sealant into a groove of bipolar plates is well known in the art. For example, Schilling et al. U.S. Patent 6,338,492 teaches injecting sealing material in grooves of bipolar plates (col. 3, lines 40-50). Second, the claims do not require injecting the seal into a *completely enclosed groove to form the necessary seals*

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*between adjacent plates*. The claims only require "injecting a sealing material into a groove network". It is the claims that define the claimed invention, and it is the claims, not specifications that are anticipated or unpatentable.

Constant v. Advanced Micro-Devices Inc., USPQ 2d 1064. Consequently, the only obvious variant required in combination with '991 is injecting the seal into a groove network. Therefore, the rejection stands since the obviousness of '911 has been established.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In



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no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Barr, may be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MW

12/12/05

MICHAEL BARR  
SUPERVISORY PATENT EXAMINER  
